[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0441; Directorate Identifier 2012-CE-011-AD]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileria de Aeronáutica S.A. (EMBRAER) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Empresa Brasileria de Aeronáutica S.A. (EMBRAER) Model EMB-505 airplanes. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an inadequate amount of drain holes in the primary control surfaces (rudder, elevator, and aileron) and their tab surfaces may allow water to accumulate in the control surfaces. This condition could cause unbalanced flight control surfaces and reduced flutter margins, which could result in loss of control of the airplane. We are issuing this proposed AD to require actions to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), Phenom Maintenance Support, Av. Brigadeiro Faria Lima, 2170, São José dos Campos - SP, CEP: 12227-901 – PO Box 36/2, BRASIL; fax ++55 12 3927-2619; email phenom.reliability@embraer.com.br; Internet: http://www.embraer.com. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0441; Directorate Identifier 2012-CE-011-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to http://regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian Airworthiness Directive 2012-03-01, dated March 20, 2012 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

> It has been found that certain regions of the rudder, elevator, ailerons, and their tabs surfaces does not present adequate drainage capacity to avoid water accumulation inside of these control surfaces. Internal water accumulation may lead to flight control surfaces unbalancing possibly reducing the flutter margins, which could result in loss of airplane control.

The MCAI requires visually inspecting the control surfaces (rudder, elevator, and aileron) and their tab surfaces for the existence of required drain holes and modifying the control surfaces by drilling drain holes. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

EMBRAER has issued Phenom Service Bulletin No. 505-57-0002, dated February 13, 2012; Phenom Service Bulletin No. 505-57-0003, dated November 16, 2011; and Phenom Service Bulletin No. 505-57-0004, dated February 16, 2012. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of the Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD will affect 38 products of U.S. registry.

We also estimate that it would take from .5 work-hour to 2 work-hours per product for 10 of the affected airplanes to comply with the basic inspection requirements of this proposed AD. The average labor rate is $85 per work-hour.

Based on these figures, we estimate the cost of the proposed inspection on U.S. operators to be from $425 to $1,700, or $42.50 to $170 per product.

In addition, we estimate that any necessary follow-on actions would take from 2 work-hours to 38 work-hours and require parts costing $50, for a cost from $220 to $3,280 per product. We have no way of determining the number of products that may need these actions.

We also estimate that it would take from 19 work-hours to 27 work-hours per product for 36 of the affected airplanes to comply with basic modification requirements of this proposed AD. The average labor rate is $85 per work-hour. Required parts would cost about $100 per product.

Based on these figures, we estimate the cost of the proposed modification on U.S. operators to be from $61,740, to $86,220, or $1,715 to $2,395 per product.

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Empresa Brasileria de Aeronáutica S.A. (EMBRAER): Docket No. FAA-2012-0441; Directorate Identifier 2012-CE-011-AD.

(a) **Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) **Affected ADs**

None.

(c) **Applicability**

This AD applies to the following Empresa Brasileria de Aeronáutica S.A. (EMBRAER) Model EMB-505 airplanes certificated in any category.

(1) Group 1: Serial numbers (S/Ns) 50500030, 50500033 thru 50500037, 50500039, 50500040, 50500044, and 50500046.

(2) Group 2: S/Ns 5050004 thru 50500029, 50500031, 50500032, 50500038, 50500041 thru 50500043, 50500045, 50500047 thru 50500059, 50500061, 50500063, 50500065 thru 50500068, 50500070, 50500074, and 50500075.

(3) Group 3: S/N 50500072.

(4) Group 4: S/Ns 50500069, 50500071, and 50500073.

(d) **Subject**

Air Transport Association of America (ATA) Code 27: Flight Controls.

(e) **Reason**

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an inadequate amount of drain holes in the primary control surfaces (rudder, elevator, aileron) and their tab surfaces may allow water to accumulate in the control surfaces. We are issuing this AD to prevent unbalanced flight control surfaces and reduced flutter margins, which could result in loss of control of the airplane.

(f) **Actions and Compliance**

Unless already done, do the following actions:

(1) Group 1 airplanes specified in paragraph (c)(1) of this AD:

(i) Within the next 100 hours time-in-service after the effective date of this AD or within the next 3 calendar months after the effective date of this AD, whichever occurs first, visually inspect the right-hand (RH) and left-hand (LH) ailerons lower skin for the existence of required drain holes.

(ii) Before further flight after the inspections required in paragraph (f)(1)(i) of this AD, if the required drain holes do not exist, drill the drain holes.

(iii) Within the next 24 months after the effective date of this AD, rework the ailerons, ailerons trim-tabs, ailerons horn cover, rudder, rudder trim-tab, elevators and elevators auto-tab surfaces by drilling additional drain holes.

(iv) Do the actions required in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD following the Accomplishment Instructions in EMBRAER Phenom Service Bulletin No. 505-57-0003, dated November 16, 2011.

(v) Do the actions required in paragraph (f)(1)(iii) of this AD following Part I of the Accomplishment Instructions in EMBRAER Phenom Service Bulletin No. 505-57-0002, dated February 13, 2012.

(2) Group 2 airplanes specified in paragraph (c)(2) of this AD: Within the next 24 months after the effective date of this AD, rework the ailerons, ailerons trim-tabs, ailerons horn cover, rudder, rudder trim-tab, elevators and elevators auto-tab surfaces by drilling additional drain holes. Do the modifications following Part I of the Accomplishment Instructions in EMBRAER Phenom Service Bulletin No. 505-57-0002, dated February 13, 2012.

(3) Group 3 airplanes specified in paragraph (c)(3) of this AD:

(i) Within the next 24 months after the effective date of this AD, rework the rudder, rudder trim-tab, elevators and elevators auto-tab surfaces by drilling additional drain holes.

(ii) Within the next 24 months after the effective date of this AD, inspect the ailerons for the existence of required drain holes.

(iii) Before further flight after the inspections required in paragraph (f)(3)(ii) of this AD, if the required drain holes do not exist, drill the drain holes.

(iv) Do the actions required in paragraph (f)(3)(i) of this AD following Part II of the Accomplishment Instructions in EMBRAER Phenom Service Bulletin No. 505-57-0002, dated February 13, 2012.

(v) Do the actions required in paragraphs (f)(3)(ii) and (f)(3)(iii) of this AD following Part II of the Accomplishment Instructions in EMBRAER Phenom Service Bulletin No. 505-57-0004, dated February 16, 2012.

(4) Group 4 airplanes specified in paragraph (c)(4) of this AD:

(i) Within the next 24 months after the effective date of this AD, inspect the ailerons, elevators, and rudder for the existence of required drain holes.

(ii) Before further flight after the inspection required in paragraph (f)(4)(i) of this AD, if the required drain holes do not exist, drill the drain holes.

(iii) Do the actions required in paragraphs (f)(4)(i) and (f)(4)(ii) of this AD following Part I of the Accomplishment Instructions in EMBRAER Phenom Service Bulletin No. 505-57-0004, dated February 16, 2012.

(g) **Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Jim Rutherford,

Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) **Reporting Requirements:** For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(h) **Related Information**

Refer to MCAI Agência Nacional de Aviação Civil (ANAC) Brazilian Airworthiness Directive 2012-03-01, dated March 20, 2012; EMBRAER Phenom Service Bulletin No. 505-57-0002, dated February 13, 2012; EMBRAER Phenom Service Bulletin No. 505-57-0003, dated November 16, 2011; and EMBRAER Phenom Service

Bulletin No. 505-57-0004, dated February 16, 2012, for related information. For service information related to this AD, contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), Phenom Maintenance Support, Av. Brigadeiro Faria Lima, 2170, São José dos Campos - SP, CEP: 12227-901 – PO Box 36/2, BRASIL; fax ++55 12 3927-2619; email phenom.reliability@embraer.com.br; Internet: http://www.embraer.com. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on April 18, 2012.

John Colomy,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

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